Flightfax

ARMY AVIATION
RISK-MANAGEMENT
INFORMATION

March 2001 ♦ VOL 29 ♦ NO 3

http://safety.army.mil

Shipboard Landings can be a Wild Ride

Shipboard Landings are a Wild Ride

The recent tragedy involving a Marine Corps CH-46, in which nine military personnel perished during a day VFR approach to a ship, is a vivid reminder that even seasoned pilots who operate from ships routinely can quickly find themselves at risk.

Whether you only land aboard a ship at sea once, or your mission essential task list details an over-water requirement, knowing the dangers of landing and recovering to pitching, rolling, moving ships may save your life. Here are some suggestions from JSHIP, the Department of Defense-chartered Joint Test and Evaluation Program designed to improve the interoperability of non-Navy helicopters on Navy ships.

■ Plan for unpredictable turbulence.

■ Know the approved wind envelope for your aircraft on the specific landing spot of the specific ship.

■ Review Navy procedures, voice calls and LSE (Landing Signal Enlisted) Hand Signals.

■ Turn off your AFCS.

■ If you expect to be hangared: (the hangar bay of the ship)

■ JP-5 required

■ Blades must be folded

Plan For Turbulence

Because of wind flow anomalies over the flight deck and the close proximity of the ship's superstructure, expect turbulence at any time during takeoff or landing.

If you are operating on a multi-spot ship with other aircraft, expect interfering rotor-wash and as little as 15 feet between rotor disks.

Use Only Approved Wind Envelopes

■ You are always safe to use the generic (but highly restrictive) wind envelope that is good for all aircraft on all ships.

■ If your aircraft has been tested and approved for expanded wind envelopes on a specific class of ship and a specific landing spot, then and only then can you be assured of safe launch/recovery ops.

Approved wind envelopes can only be found in the following Navy Pubs:

● CV NATOPS (Naval Aviation Training and Operating Procedures-Aircraft Carriers.)

● LHA/LHD/MCS NATOPS (Amphibious Assault Ships/Mine Countermeasure Support Ship, Naval Aviation Training and Operating Procedures.)

● Navy Pub 3-04.1, also known as the Air Capable Ships NATOPS, for single and dual spot ships.

● WARNING: FM 1-564, Shipboard Operations does have wind envelopes, but not all of them are accurate.

Review Navy Procedures

■ Prior to your arrival, familiarize yourself with arrival, landing, refueling and shutdown procedures.

■ Check out **www.jship.jcs.mil** for an easy to understand tutorial on shipboard procedures, electronic copies of the all-ship NATOPS manuals, and FM 1-564, and printable pilot knee board cards to have when you need them.

■ The LSE is your marshalling authority on the flight deck. Review the hand signals he will be using and remember to only proceed with engagement or disengagement of your rotors on his signal. This is necessary to ensure the ship is not maneuvering and the winds are within limits.

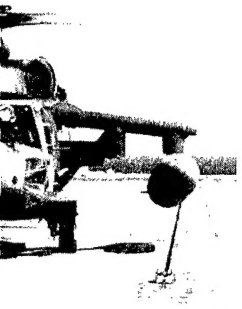
■ The LSE will want to gain your approval for all people who enter or exit your rotor

disk area.

■ Expect to have the Navy crew immediately chock and chain your aircraft upon landing on the LSE's signal, but don't expect them to know where your hard-points are—have your crew chief help them.

Staying Aboard

■ If you expect to protect your aircraft from the elements, you will need to be prepared to stuff your helo in the hangar (deck). That means that you must fold your blades (yes really) and have less than ½ tank of gas if it is other than JP-5. The easiest solution is to plan your last one or two refuelings at Naval or Marine Corps Air Stations.



■ The restriction is due to keeping the flash point of the fuel in your tanks below 120 degrees in the hangar.

Bottom Line

Shipboard helicopter operations present a whole new set of hazards and unfamiliar conditions that you must prepare for. Check out the website: www.jship.jcs.mil to review the latest on issues associated with your aircraft and the ships you expect to operate with.

—CDR Bret Gary, JSHIP, Navy Deputy Director, Paxtuxent River, MD DSN 342-4936 (301)342-4936,GaryB@navair.navy.mil and Bob Giffin, System Safety Manager, CW4, USA Ret. US Army Safety Center, Ft Rucker, AL, DSN 558-3650 (334) 255-3650, giffinr@safetycenter.army.mil

Have we forgotten how to teach "What RIGHT looks like"?

This is the first of a 5-part series on the risk management process. This article focuses on step 1 "Identify the hazard."

The greatest legacy that leaders can leave their subordinates is the ability to know what RIGHT looks like. Experience can certainly be a powerful teacher, but it can also be the most costly in terms of lives and materiel when a mistake is made that clearly could have been prevented if the leader knew what RIGHT looked like. If the leader doesn't know RIGHT, he doesn't know WRONG. And if he doesn't recognize WRONG, he can't make it RIGHT. Then, he's doomed to needlessly repeat lessons we fail to learn, sometimes tragically. In the language of risk management: If the leader doesn't recognize the hazards (know what RIGHT looks like), then he won't assess the risks and develop appropriate controls (turn WRONG into RIGHT).

Recent accidents indicate that our soldiers do not have this leader tool in their backpacks, so the obvious question is: "Why not?"

First, what do I mean by "What does RIGHT look like?" I define it as being able to instinctively assess a situation as a right or wrong way to do a task; and if wrong, take the appropriate action to avoid an accident—a *sixth sense* perhaps, or that feeling of the hair rising on the back of your neck. Others might define it simply as common sense applied to a situation.

Whatever your definition, it is based on experience—yours or someone else's. For example, you wouldn't consider operating your privately owned vehicle (POV) without using your seatbelt. Someone taught you that. Likewise, you wouldn't allow anyone to ride in your vehicle without being belted in. Why? Because you know what RIGHT looks like.

Recent accident investigations clearly indicate that many of our soldiers are not exercising this absolutely essential leadership quality. Let me illustrate my argument.

Remember a bad example is still a lesson learned. . . but you have taught what WRONG looks like.

An eager ground cavalry platoon leader took his M3A3 Bradley platoon to the field to conduct much needed training. When the platoon reached a rain-swollen creek that was clearly impassable by fording, a squad leader elected to cross anyway. The result was a swamped vehicle and a drowned soldier.

This training experience cost a soldier his life. Specifically, this accident had failures of what RIGHT looks like throughout the chain of command. The leaders responsible for training this platoon leader and his platoon sergeant were nowhere to be found.

This is just the latest example in a very disturbing trend. Young leaders don't seem to recognize what RIGHT looks like, nor do they identify the hazard and appreciate the associated risk. How do we as leaders correct this trend? What is the mechanism in your unit that allows junior leaders the latitude to learn valuable lessons while still maintaining that necessary oversight to prevent accidents? Without an effective mentoring process, how will the future leaders of our Army build their foundation? In other words, how do you train a leader to know what RIGHT looks like?

Leadership remains an art, not a science. This simple statement means that the answer is not a checklist. The essence of mentoring from every level is that it builds competence and confidence in our leaders. Equally as clear is that mentoring does not occur if leaders are not present when their soldiers are training.

Remember, too, that the bad example is still a lesson learned. For example, who is to blame when the chain of command allows soldiers to use a propane heater in a location that the manufacturer clearly warns that it should not be used? The initial answer is clear, yet the deeper question is how did this chain of command not recognize this as WRONG and make it RIGHT?

This is the essence of knowing what RIGHT looks like. When you walk by a bad practice or overlook a standard not being met, you have taught the Army's young leaders a lesson. But you have taught what WRONG looks like; you have established a new, lower standard of acceptable performance; you have set young leaders up to repeat history's mistakes.

I have found nothing more rewarding in my military career than being in command of soldiers. Our soldiers need our very best effort as well as the opportunity to learn. Leaders must create the proper environment and then coach, teach, and mentor leaders at every level. Our Army needs it now more than ever. Pass on your talent and experience. Teach our soldiers to recognize what's WRONG so they ***know what RIGHT looks like.***

POC: COL Michael N. Riley, USASC Director of Operations, DSN 558-2461 (334-255-2461), rileym@safetycenter.army.mil

Attention Chinook crewmembers!

Incorrectly installed CH-47D droop stop Alert!

A recent accident investigation into a CH-47D droop stop failure revealed that incorrect length bolts may have caused the aft droop stop to fail, resulting in significant damage to the aircraft from blade strikes.

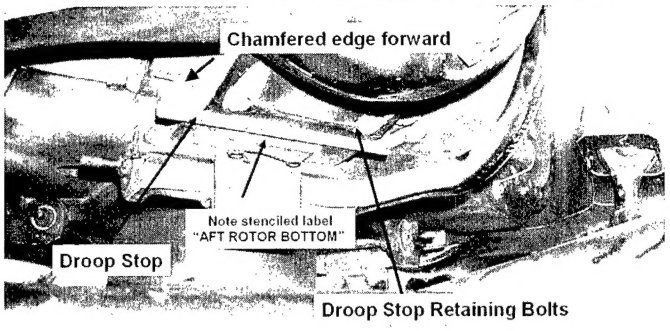
A subsequent Aviation Safety Action Message (ASAM), CH-47-01-ASAM-05 was issued directing units to inspect forward and aft droop stop bolts for correct length.

A few weeks later, another droop stop failure accident occurred. The subsequent accident investigation determined that the original ASAM may have inadvertently caused units to incorrectly reinstall the forward and aft droop stops after inspecting them for correct bolt length. This accident investigation determined that Task 5-48, Replace Fixed Droop Stop, in TM 55-1520-240-23-4, does not adequately describe the correct installation of the forward and aft droop stops. The drawings contained in the maintenance manual do not show the detail of the droop stop's chamfered and beveled edges, and the correct positioning of the droop stop.

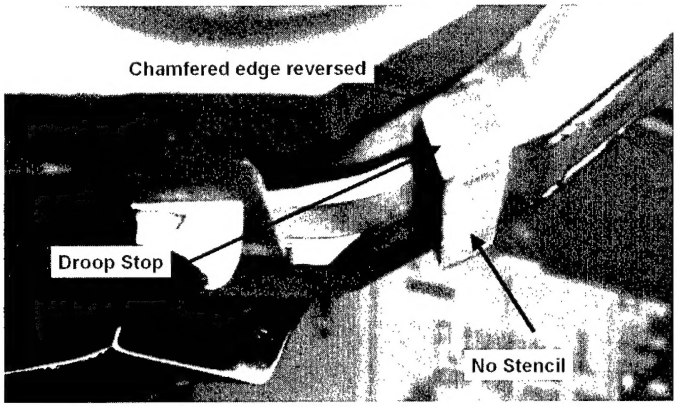
The droop stop can be installed incorrectly. Incorrect installation will lead to stress on the retaining bolts and subsequent failure of the droop stop.

As a result of this investigation, the Aviation and Missile Command (AMCOM) issued Safety of Flight Message CH-47-01-02 for inspection of all droop stops for proper installation. This message includes detailed inspection descriptions. A copy of this message with detailed technical drawings can be accessed at http://safety.army.mil under the CH-47D Safety of Flight link. (See photos for correct and incorrect examples.)

CORRECTLY INSTALLED DROOP STOP



INCORRECTLY INSTALLED DROOP STOP



The CH-47D droop stops are seldom removed or installed at unit level. Most installations occur at depot level when the rotor head is overhauled. The forward droop stop (P/N 114R2063-7) and the aft droop stop (P/N 114R2087-3) should be stenciled on the bottom: AFT ROTOR BOTTOM or FWD ROTOR BOTTOM. **These parts are not interchangeable.**

The investigation also revealed that these stencils can be painted over with black paint during depot overhaul of the rotor heads. Without the stenciling and detailed installation instructions in the maintenance manuals, units may incorrectly reinstall droop stops, and an accident can occur. Additional investigation revealed that there are many of these parts in the supply system that are not correctly labeled-this, too, can lead to incorrect installation. Product Quality Deficiency Reports (SF368) should be initiated IAW DA PAM 738-751 if any of these unlabeled parts are discovered in the supply system.

—Major Mike Cumbie, Chief, Scout/Attack Branch, USASC, DSN 558-3754, (334) 255-3754, cumbier@safetycenter.army.mil

Didn't USAARL research that?

AVIATION RESEARCH AT FORT RUCKER HELPS THE AVIATION COMMUNITY

The U.S. Army Aeromedical Research Laboratory (USAARL) has 38 years of research experience in aviation medicine. It is one of seven laboratories under the U.S. Army Medical Research and Materiel Command, located at Fort Detrick, Maryland. The mission of the laboratory since its establishment in 1962 has been to support Army aviation and airborne activities.

This mission has since expanded to include medical research programs in acoustics and vision, and health hazard assessments of rotary-wing aircraft, tactical ground vehicles, selected weapons systems, and airborne operations.

Housed in an approximately 167,000 square-foot building complex, USAARL draws upon the skill, education, experience, and dedication of 90 military and civilian scientists, engineers, flight surgeons, technicians, and support personnel. Major capital resources include a full-motion, fully instrumented, climate controlled NUH-60FS research flight simulator, a man-rated 3-axis ride simulator capable of replicating the ride of any rotary-wing aircraft or ground tactical vehicle, an anechoic acoustic chamber, and dedicated aircraft assets consisting of a JUH-1H (Huey) and a JUH-60A (Black Hawk).

USAARL's current areas of research include:

- Aircrew endurance and sustainment, development of aviation life support equipment and crashworthiness design standards.
- Coping strategies for shiftlag and jetlag.
- Acceleration injury assessment using a crash manikin.
- The communications earplug.
- The UH-60 cockpit airbag system.
- Spatial disorientation.
- The effects of head-supported weights on Army warfighters.
- Refractive error correction methodologies and military implications.
- Visual performance with electro-optical displays.

USAARL supports cooperative efforts with both commercial and other Department of Defense (DOD) agencies. A customer-funded program allows DOD customers to access USAARL's expertise and research resources for specific needs. Through Cooperative Research and Development Agreements (CRDAs), commercial organizations and universities can exchange data, equipment, and/or services for the purpose of conducting joint research investigations, maintaining scientific state-of-the-art awareness, and expediting technology transfer. USAARL currently is entered into 14 CRDAs with various companies and universities.

Today, the limited funds for research must be oriented to ensure relevant direction with the results transferred to both the military and civilian communities. USAARL scientists in 1999 produced 15 open-literature articles published in scientific journals and professional magazines, published 27 technical (laboratory) reports, and made 32 presentations at professional conferences and meetings.

Over its 38 years of research for the soldier, USAARL has published 1,189 reports supporting the Army mission, the majority of which are available through the Defense Technical Information Center. An annotated bibliography of all laboratory reports is published annually and is available for distribution.

—Linda M. Burt, Writer/Editor, USAARL, DSN 558-6906 (334) 255-6906; Linda.burt@se.amedd.army.mil

Visit our website: http://www.USAARL.army.mil

Yellow visors...More harm than good!

Do you have a yellow-tinted visor on your helmet or in your flight bag? Does your buddy? Many aviators do. That may be a problem.

The Question

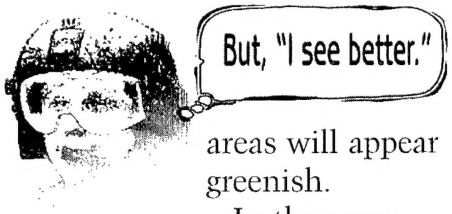
Every 3 to 4 years the question, "Is the Army ever going to issue yellow-tinted visors?" seems to rise like a phoenix. The Army's answer to this question has been, and still is, "No." But, there is still a persistent perception among aviators that visual performance can be improved by wearing yellow-tinted (blue-blocking) visors, especially in haze and snow environments. The idea that yellow-tinted filters, glasses, etc., can be used to improve visual performance can be traced back as far as 1912. Today, one only has to browse through hunting and gun magazines to find more than one advertisement for "yellow, high-contrast" shooter's glasses.

In combat, where even the smallest edge can make the difference between life and death, soldiers, sailors, and aviators are all looking for that one improvement which will make the difference. In response, the Army, Navy, and Air Force, over the years, have conducted numerous studies to investigate the possible benefits of using these "vision enhancers."

Just The Facts, Please

From 1912 to 1999, over 200 papers have been published on performing various tasks while viewing through yellow or blue-blocking filters. The overwhelming majority of these papers conclude that the use of these filters does not improve performance of the selected tasks and can actually degrade performance.

For example, color information is very important to aviators. Colored lights are used at airports to provide information. Blue lights outline taxiways. Taxiway turnoff and centerline lights are green. When viewing through yellow visors, pure blue light is not transmitted and therefore disappears. Broadband blue lights appear greenish. White and yellow lights appear yellow. Accurate color discrimination through yellow filters is also problematic in other aviation areas, e.g., smoke grenade signaling and aviation sectional charts. Smoke grenades come in such colors as red, green, yellow and violet. When viewed through yellow visors, yellow smoke will appear white, and the violet smoke will look orange. Aviation maps color code information such as areas with dense populations and urban structures (yellow), water (blue), restricted areas (blue), and controlled air spaces (blue and magenta). When these maps are viewed through yellow visors, population and urban structures will blend away, and water and restricted



areas will appear greenish.

In the same studies that failed to find performance improvement when viewing through yellow filters, the study participants reported that the scene was brighter, and their vision was improved. But believing that you can see better does not mean that your visual performance is better. Yellow visors, by blocking the blue parts of the scene, give the appearance of reduced haze. But this is a false improvement because the blue light carries information that is lost when viewing through the yellow visor.

The Bottom Line

For the overwhelming number of flight scenarios and tasks, the use of yellow visors will not improve visual performance. For many tasks, visual performance, and therefore mission effectiveness, will be compromised. Undoubtedly, there are unique or narrowly defined situations where the yellow visor may provide an edge. However, it must be generally concluded that unilateral use of yellow visors will do more harm than good.

—Clarence E. Rash, research physicist, USAARL, DSN 558-6814, (334) 255-6814, Clarence.rash@se.amedd.army.mil; Sharon D. Manning, Aviation Branch Safety Office, Fort Rucker, AL, DSN 558-3000, (334) 255-3000

Safety professionals must make a difference!

In fiscal year 2000, the Army enjoyed one of its best years ever in terms of safety performance. In aviation, both the number of fatalities and the Class A and B flight accident rates were reduced to all-time lows. In ground accident prevention, FY00 was the second-lowest year ever in terms of the number of ground and privately owned vehicle fatalities.

Each and every one of you can take credit for these safety successes. All of us rolling up our sleeves and working together made a difference. It was an extraordinary effort of—

- Leadership involvement in safety programs.
- Safety professionals-civilians and military-helping commanders make informed risk decisions.
- NCOs enforcing standards and making on-the-spot corrections.
- Individual soldiers exhibiting the self-discipline to follow standards while resisting the temptation to take shortcuts sometimes perceived necessary due to the OPTEMPO.

We all can be, and rightfully should be, proud of the Army's FY00 safety performance. However, early trends in FY01 indicate that we are not following success with success. We have already surpassed the total number of Class A aviation accidents from FY00 and we are less than half way through the fiscal year. Leader intervention is necessary to stop this trend and to get us back on track.

Individually and collectively, we will have to seek even better ways of making a difference in our Army

At this year's Fall Army Safety Conference, members of two distinguished panels provided what I believe are some critical insights into how each of us can make a difference in the safety performance of our organizations and units. Three highly respected members of our civilian safety professional corps-Ms. Connie DeWitte, Chief of the U.S. Army Corps of Engineers Safety and Occupational Health program; Mr. John Frost, Chief of the Aviation and Missile Command Safety Office; and Mr. Fred Fanning, Safety Director of the U. S. Army Maneuver Support Center, Fort Leonard Wood—shared with us some sage advice on being relevant to their commander's needs and things they wish they had known before being placed in their first safety positions.

Their views from the safety manager perspective were complemented by recommendations from three field commanders—COL Bernard Champoux, Commander, 2d Bde, 10th Mountain Division; COL Nolen Bivens, Commander, Basic Combat Training Brigade, Fort Benning; and LTC Jeffrey Cairns, Deputy Commander, 1st Special Warfare Training Group, Fort Bragg—on what they, as commanders, are looking for from their unit safety managers.

Personally, I believe that listening to the voices of experience and applying the panels' proven recommendations can help each safety professional better support his or her commander in establishing and executing viable, risk-management-based safety programs. I urge each safety professional, civilian and military, to carefully consider the comments from both panels and incorporate their lessons learned and recommendations into your proactive goals for making a difference in the Army's continuing campaign to reduce accidental losses of both human and materiel resources.

Things I Wish I Had Known Before My First Job-A Safety Manager's Perspective

We have all learned lessons the hard way. We have all wished that we had been told some things before we were assigned to our first safety position. Following are some of the lessons that Ms. DeWitte, Mr. Frost, and Mr. Fanning have learned from a cumulative total of 70 years of experience in the safety field:

- Pick battles that are big enough to be important, but

small enough to win.

■ Remember that no one's view is complete. Each person sees some of the truth. Listen carefully to everyone's position before forming your own. You can learn from them all.

■ Obtain command support. Command support makes all the difference in the world to your success. It is great when you have it, and it is frustrating when you don't. It is also very fleeting. You must be relevant to the commander's needs.

■ It's the little things that make a big difference in a safety and health program.

■ Widespread impact can only come through effective leveraging through others.

■ Think outside the box - if for no other reason than to keep life interesting.

■ Interdependence results in a stronger safety and health program than independence.

■ Without deadlines, goals are just dreams. Or put more directly, if it weren't for the last minute, nothing would ever get done.

■ Integration is the lifeblood of an effective safety program.

■ Attitude often breaks or makes a situation.

■ Make fun and laughter core values of your safety office. Take your work seriously, but not yourself.

■ Bad safety news does not get better with age.

■ Surround yourself with great people.

■ Don't just tell me that I can't do my job because it is unsafe. Rather, tell me how to do my job safely.

■ Take the initiative, be a Safety Professional, not a practitioner.

How Unit Safety Managers Can Make a Difference–A Commander's Perspective

The following insights into how safety professionals can better serve their commanders were outlined by COL Champoux , COL Bivens, and LTC Cairns:

■ Find what is knowable and what is unknown.

■ Waiting for the question to be asked is the path to irrelevancy.

■ Safety analysis must inform the decision maker about risks and returns of each decision.

■ Decision implementation is based on planning. Planning results from organizational learning. And safety analysis must speed up the organization's learning.

■ There is no cold start. Risk is a cumulative thing.

■ Nobody has all the answers. Collaborate. Function as a team.

■ Be ready to serve - be trained for the position. Understand the organization's mission.

■ Understand the military decision-making process and how to integrate risk management into it.

■ Be visible and proactive in the organization. Get out from behind the desk and out into the organization to see first hand what the mission is all about and what risks are present.

■ Provide continuity, cohesiveness, and commitment.

■ Understand the benefits of professional coordination up, down, and across the organization.

■ Become the commander's right-hand source for all safety issues and risk-management decisions.

■ Be the professional safety watchdog in the organization-the honest broker.

■ Be an integral part of the staff. Plug into the S3 section; attend quarterly training briefs. Be an advisor to the command team.

■ Be part of the solution. Be a risk management analyst. Create an atmosphere of managing risks—not of telling others what to think, but how to think in terms of hazards and controls. Anchor to standards, and offer the commander informed risk-management options.

■ Be a subject matter expert from both a safety and task perspective. In addition to understanding and ensuring that the OSHA and environmental standards are met, devote time to understanding the mission and the potential hazards and risks associated with each METL task.

■ Go beyond a simple knowledge of risk management; acquire the wisdom to apply the process.

■ Think in terms of where is the next accident going to happen and how you can help the commander reduce the risks.

■ Be physically fit and willing to go to the field with the troops if necessary.

■ Plug into the Army's Risk Management Information System (**http://safety.army.mil**). There is an incredible amount of resources and information available at this site for safety personnel to use.

Each commander reminded us that safety is not a mission unto itself; it is an integral part of every mission. A leader's credibility is built on trust. And safe operations form a foundation of trust within each command.

SUMMARY

GEN Shinseki, the Army's Chief of Staff, is adamant that he is the Safety Officer for The Army. He is equally adamant that each commander with a flag outside his or her unit or organization is the Safety Officer for that unit or organization. At the third quarter safety in-progress review, GEN Shinseki stated that "our business is a dangerous business, and command involvement is the key to our success. When I talk safety and why we are having problems, I talk to commanders." His words reinforce to those of us who have accepted command responsibility that it is up to each of us to protect and ensure the safety of the human lives entrusted to our care.

Commanders across the Army are busy people, and they need your help. The success of the safety program depends, in large part, on you-the safety professional-understanding your commander's needs and assisting him or her in making sound risk decisions. If you are relevant to your commander's goals, he or she will find time to engage your counsel. You *can* make a difference in your organization's safety performance, which will ultimately enhance the combat readiness of our Army.

—BG Gene M. LaCoste, Director of Army Safety, DSN 558-2029, Commercial 334-255-2029

President's message 2001

SUBJ: ***PRESIDENT'S MESSAGE TO THE ARMED FORCES OF THE UNITED STATES***

To the armed forces of the United States and the men and women whose work supports them:
Your service in the cause of freedom is both noble and extraordinary.
Because of you, America is strong and the flame of freedom burns brighter than at any time in history.
Your country can never repay you for the sacrifices and hardships you endure. But we are grateful for the liberties we enjoy every day because of your service. As your commander-in-chief, I will always support you and your families, so that this great nation continues to have the greatest armed forces in the history of the world.

THANK YOU.

SIGNED,
GEORGE W. BUSH

In memoriam

This issue is dedicated to the memory of Sally Yohn, who died February 2, 2001 after a courageous struggle with cancer. Sally was editor of *Flightfax* for several years, beginning in 1996. She was also a contributor to *Army Aviator*, *Army Aviation Digest*, *Soldier Magazine*, and other publications; and a member of the Order of Saint Michael.

Accident briefs

Information based on *preliminary* reports of aircraft accidents

AH1

Class E

■ During aerial gunnery, pilot heard a loud report from the engine. Aircraft yawed left, and torque increased from 58 PSI to 71 PSI. Nr decreased to 93%. Aircraft was landed without further incident. Maintenance was notified. Governor and fuel control were replaced, aircraft was placed back in service.

■ At cruise, TGT fluctuated +/- 4% N1, +/- 3% N2. Aircraft yawed slightly left and right. The aircraft was landed without further incident. Maintenance personnel replaced the fuel control.

AH64

Class A

A series

■ Aircraft experienced fire in the aft cargo compartment during taxi for take-off. Emergency shutdown executed by crew. Fire extinguished by firefighters. (reclassified from Class B per unit ECOD)

Class B

A series

■ During terrain flight, aircraft's main rotor blades contacted tree. Damage occurred to all four main rotor blades, three presumed damaged beyond repair. Aircraft was landed without further incident.

Class C

■ Aircraft contacted wires during NOE flight and the forward wire strike protective system cut all three wires in the set. Aircraft landed without further incident. Damage to the lower IFF antenna and IDF antenna mount and two main rotor blades, in addition to damage to wires.

Class E

A series

■ In flight, on down wind, aircraft's No.1 engine segment light illuminated with no corresponding lights in the pilot's station. Aircraft landed without further incident. Fault panel was replaced.

D series

■ During run-up, TADS was discovered to be inoperable. Aircraft was shutdown without further incident. TADS control panel assembly was replaced.

CH47

Class E

D series

■ In cruise flight, aircraft entered uncommanded pitch-down. Pilot corrected and noticed that VGI had tumbled. Pilot switched to VGI Emergency. Aircraft then entered uncommanded pitch-up. Co-pilot disengaged AFCS. Uncommanded inputs ceased. When co-pilot re-engaged the AFCS systems individually, aircraft continued uncommanded inputs. Crew returned home station with AFCS disengaged. Maintenance replaced AFCS switches assembly.

■ During deceleration for approach to land, crew noticed that aft longitudinal cyclic trim (LCT) activator had not retracted. Crew performed go-around and performed emergency procedures. Crew switched to Manual LCT and retracted the aft LCT for 30 seconds, LCT was still extended. Crew landed without further problems.

OH58

Class B

D-R series

■ During SEF at altitude, the aircraft impacted the runway, landed hard, became airborne again and came to rest in the sod adjacent to the runway.

Class C

D(I) series

■ Aircraft contacted commo wire at 5 feet above ground level and subsequently landed hard. Aircraft sustained a collapsed left skid, came to rest on Hellfire rack. Damage noted to tail boom and stinger.

Class C

C series

■ Aircraft landed hard and tail low during performance of standard auto. Damage occurred to K-Flex driveshaft, isolation mount, aft cross tube and tail boom.

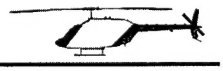
D(I) series

■ Aircraft experienced excessive engine torque reading during hovering autorotation maneuver.

D(r) Series

■ Suspected "hot start" during engine run-up following engine flush.

TH67



Class D

A series

■ Spike knock revealed damage to K-Flex driveshaft, isolation mount, and striker plate.

UH1

Class E

H series

■ During straight and level flight, Master Caution and HYD Oil Pressure segment light illuminated. There was corresponding feedback in the controls and a cavitating sound from the hydraulic pump. Emergency landing was immediately initiated. The tail rotor hydraulic servo pressure elbow had cracked and the hydraulic sight gauge was empty. The hydraulic fluid had been expelled from the cracked elbow.

UH60

Class C

L series

During flight no.1 engine experienced a "High side failure" and NP went to 120%. Aircraft was landed with no further incident. Apparent indication is that the DECU failed.

For more information on selected accident briefs, call DSN 558-9855 (334-255-9855). Note: Information published in this section is based on preliminary mishap reports submitted by units and is subject to change.

NEW System Safety Managers

Over the past months, the United States Army Safety Center (USASC) has added three new aircraft system safety managers to its staff: a Fixed-Wing/Cargo Aircraft and Tactical Unmanned Aerial Vehicle (TUAV) System Safety Manager, a Utility Aircraft System Safety Manager, and a Scout/Attack Aircraft and Flight Data Recorder System Safety Manager.

They are basically responsible for ensuring that an aircraft is safe throughout its life cycle—cradle-to-grave system safety. System safety is nothing more than risk management.

System safety managers identify hazards by reviewing Abbreviated Aircraft Accident Reports (AAAR - the old PRAM) daily, reviewing Class A-D accident reports, searching the USASC database, contacting units in the field by telephone and e-mail and attending various user's and safety conferences.

Upon identifying a potential or real hazard, contact is made with the appropriate Project/Program Manager (PM) and a course of action is recommended. Obviously, the farther along in the life cycle of the aircraft a hazard is identified, the harder it is to design out that hazard. The selected course of action will normally result in accepting some residual risk, thus requiring additional training or education based on time and resources available and the nature of the hazard.

With military aviation experience (officer and warrant officer), these three new aviation system safety managers can also answer your questions concerning and provide information about aviation operations, safety program management, and accident investigation. Your phone calls or e-mail messages requesting assistance are welcomed.

For all your questions or issues concerning—

- Fixed-wing/cargo aircraft and TUAVs, contact Mr. Gary Braman, DSN 558-2676, (334) 255-2676 or e-mail bramang@safetycenter.army.mil
- Utility aircraft, contact Mr. Bob Giffin DSN 558-3650, (334) 255-3650 or e-mail giffinr@safetycenter.army.mil
- Scout/attack aircraft and flight data recorders, contact Mr. Joseph Creekmore at DSN 558-2259, (334) 255-2259 or e-mail creekmorej@safetycenter.army.mil

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U.S. ARMY SAFETY CENTER

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